

ABSTRACT OF THE DISCLOSURE

A system for inspecting a specimen, such as a semiconductor wafer that uses a laser light source for providing a beam of light. The beam is applied to a traveling lens acousto-optic device having an active region and responsive to an RF input signal to selectively generate plural traveling lenses in the active region. The traveling lens acousto-optic device is operative to receive the light beam and generate plural flying spot beams, at the respective focus of each of the generated traveling lenses. A light detector unit, having a plurality of detector sections, each detector section having a plurality of light detectors and at least one multi-stage storage device operative to receive in parallel an input from the plurality of light detectors, is used to generate useable scan data. Information stored in each of the storage devices is serially read out concurrently from the multiple stages.